Title (en)

GAS SENSING DEVICE AND METHOD FOR OPERATING A GAS SENSING DEVICE

Title (de)

GASERFASSUNGSVORRICHTUNG UND VERFAHREN ZUM BETREIBEN EINER GASERFASSUNGSVORRICHTUNG

Title (fr)

DISPOSITIF DE DÉTECTION DE GAZ ET PROCÉDÉ DE FONCTIONNEMENT D'UN DISPOSITIF DE DÉTECTION DE GAZ

Publication

EP 3736564 A1 20201111 (EN)

Application

EP 19173409 A 20190509

Priority

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Abstract (en)

A gas sensing device for sensing one or more gases in a mixture of gases is provided. The gas sensing device comprises: one or more chemo-resistive gas sensors; one or more heating elements for heating each of the gas sensors; an information extraction block configured for receiving the signal samples and for generating representations for the received signal samples; and a decision making block configured for receiving the representations, wherein the decision making block comprises a weighting block and a trained model based algorithm stage, wherein the weighting block is configured for receiving the feature samples of one of the representations and for applying one or more time-variant weighting functions to each of the feature samples of the respective representation in order to calculate for each of the representations a weighted representation comprising weighted feature samples, wherein the algorithm stage comprises an input layer and an output layer, wherein the decision making block comprises one or more trained models for the algorithm stage, wherein the weighted representations for each of the gas sensors are input to the input layer of the algorithm stage, wherein the decision making block creates for each of the gas sensors sensing results for each of the gas sensors, which are created by using at least one of the one or more trained models at the algorithm stage so that the sensing results for each of the gas sensors depend on the weighted representations of each of the gas sensors.

IPC 8 full level

G01N 27/12 (2006.01)

CPC (source: CN EP KR US)

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Designated contracting state (EPC)

AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)

BA ME

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